

AlphaPlus[®] C12-14 Blend

Version 3.4

Revision Date 2023-07-06

SECTION 1: Identification of the substance/mixture and of the company/undertaking**Product information**

Product Name : AlphaPlus[®] C12-14 Blend
 Material : 1128494, 1128427, 1037004, 1067817, 1084866, 1037003,
 1037001, 1037005, 1037002

Company : Chevron Phillips Chemical Company LP
 Normal Alpha Olefins (NAO)
 10001 Six Pines Drive
 The Woodlands, TX 77380

Emergency telephone:**Health:**

866.442.9628 (North America)
 1.832.813.4984 (International)

Transport:

CHEMTREC 800.424.9300 or 703.527.3887(int'l)
 Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090
 Mexico CHEMTREC 01-800-681-9531 (24 hours)
 South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600
 Argentina: +(54)-1159839431
 EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Austria: VIZ +43 1 406 43 43 (24 hours/day, 7 days/week)
 Belgium: 070 245 245 (24 hours/day, 7 days/week)
 Bulgaria: +359 2 9154 233
 Croatia: +3851 2348 342 (24 hours/day, 7 days/week)
 Cyprus: 1401
 Czech Republic: Toxicological Information Center +420 224 919 293, +420 224 915 402
 Denmark: Danish Poison Center (Gifftlinjen): +45 8212 1212
 Estonia: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Finland: 0800 147 111 09 471 977 (24 hours/day)
 France: ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week)
 Germany: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Greece: (0030) 2107793777 (24 hours/day, 7 days/week)
 Hungary: +36-80-201-199 (24 hours/day, 7 days/week)
 Iceland: 543 2222 (24 hours/day, 7 days/week)
 Ireland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Italy: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clinic
 Poisoning and Drug Information Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371
 67042473. (24 hours.)
 Liechtenstein: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Lithuania: +370 (85) 2362052

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Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week)
 Malta: +356 2395 2000
 The Netherlands: NVIC: +31 (0)88 755 8000
 Norway: 22 59 13 00 (24 hours/day, 7 days/week)
 Poland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Portugal: CIAV phone number: +351 800 250 250
 Romania: +40213183606
 Slovakia: +421 2 5477 4166
 Slovenia: Phone number: 112
 Spain: National Emergency Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24 hours/day, 7 days/week)
 Sweden: 112 – ask for Poisons Information

Responsible Department : Product Safety and Toxicology Group
 E-mail address : SDS@CPChem.com
 Website : www.CPChem.com

SECTION 2: Hazards identification**Classification of the substance or mixture**

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Classification

: Flammable liquids, Category 4
 Aspiration hazard, Category 1

Labeling

Symbol(s) :



Signal Word : Danger

Hazard Statements : H227: Combustible liquid.
 H304: May be fatal if swallowed and enters airways.

Precautionary Statements : **Prevention:**
 P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
 P280 Wear protective gloves/ eye protection/ face protection.
Response:
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P331 Do NOT induce vomiting.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
 P403 + P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.

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Carcinogenicity:**IARC**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3: Composition/information on ingredients

Molecular formula : Mixture

| Component | CAS-No. | Weight % |
|------------------|------------|----------|
| 1-Dodecene | 112-41-4 | 50 - 80 |
| 1-Tetradecene | 1120-36-1 | 20 - 50 |
| 2-Butyl-1-Octene | 5698-48-6 | 0 - 2 |
| 2-Ethyl-1-Decene | 71138-64-2 | 0 - 2 |

SECTION 4: First aid measures

- General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.
- If inhaled : If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
- In case of skin contact : If on skin, rinse well with water. If on clothes, remove clothes.
- In case of eye contact : Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

- Flash point : 77°C (171°F)
estimated
- Autoignition temperature : 226°C (439°F)
estimated
- Suitable extinguishing media : Carbon dioxide (CO₂).
- Unsuitable extinguishing media : High volume water jet.

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- Specific hazards during fire fighting : Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.
- Further information : For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
- Fire and explosion protection : Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

SECTION 6: Accidental release measures

- Personal precautions : Use personal protective equipment. Ensure adequate ventilation.
- Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage**Handling**

- Advice on safe handling : Avoid formation of aerosol. Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.
- Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

Storage

- Requirements for storage areas and containers : No smoking. Keep in a well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection**Engineering measures**

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Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

- Respiratory protection : If ventilation or other engineering controls are not adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure, a supplied-air NIOSH approved respirator may be appropriate. If exposure to harmful levels of airborne material may occur, a NIOSH approved respirator that provides protection may be appropriate, such as: Air-Purifying Respirator for Organic Vapors, Dusts and Mists. A positive pressure, air-supplying respirator may be appropriate if there is potential for uncontrolled release, aerosolization, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.
- Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Flame retardant protective clothing. Footwear protecting against chemicals.
- Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties****Appearance**

- Form : liquid
 Physical state : liquid
 Color : Clear, Colorless

Safety data

- Flash point : 77°C (171°F)
 estimated
- Lower explosion limit : 0.5 %(V)

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| | |
|-----------------------------|--|
| Upper explosion limit | : 5.4 %(V) |
| Oxidizing properties | : no |
| Autoignition temperature | : 226°C (439°F) estimated |
| Thermal decomposition | : No data available |
| Molecular formula | : Mixture |
| Molecular weight | : Not applicable |
| pH | : Not applicable |
| Freezing point | : -13°C (9°F) |
| Boiling point/boiling range | : 213°C (415°F) |
| Vapor pressure | : 6.00 - 20.00 Pa at 25°C (77°F) |
| Relative density | : 0.75 |
| Density | : 0.75 G/ML at 25°C (77°F) |
| Water solubility | : Soluble in hydrocarbon solvents; insoluble in water. |
| Viscosity, kinematic | : 1.3 - 1.9 cSt at 40°C (104°F) |
| Relative vapor density | : 6.4 (Air = 1.0) |

SECTION 10: Stability and reactivity

| | |
|---|---|
| Reactivity | : Stable at normal ambient temperature and pressure. |
| Chemical stability | : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. |
| Possibility of hazardous reactions | |
| Hazardous reactions | : Further information: No decomposition if stored and applied as directed. Hazardous reactions: Vapors may form explosive mixture with |

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| | |
|------------------------------|---|
| | air. |
| Conditions to avoid | : Heat, flames and sparks. |
| Materials to avoid | : May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc. |
| Thermal decomposition | : No data available |
| Other data | : No decomposition if stored and applied as directed. |

SECTION 11: Toxicological information

| | |
|--|---|
| AlphaPlus® C12-14 Blend Acute oral toxicity | : LD50 Oral: > 5,000 mg/kg Species: Rat Method: Acute toxicity estimate |
| AlphaPlus® C12-14 Blend Acute inhalation toxicity | : LC50: > 20 mg/l Exposure time: 4 h Species: Rat Test atmosphere: vapor Method: Acute toxicity estimate |
| AlphaPlus® C12-14 Blend Acute dermal toxicity | : LD50 Dermal: > 2,000 mg/kg Species: Rabbit Method: Acute toxicity estimate |
| AlphaPlus® C12-14 Blend Skin irritation | : No skin irritation. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin. |
| AlphaPlus® C12-14 Blend Eye irritation | : No eye irritation. Information given is based on data obtained from similar substances. |
| AlphaPlus® C12-14 Blend Sensitization | : No adverse effects expected. Information refers to the main ingredient. |
| Repeated dose toxicity | |
| 1-Dodecene | : Species: Rat, Male and female Sex: Male and female Application Route: Oral diet Dose: 0, 100, 500, 1000 mg/kg Exposure time: 13 wk Number of exposures: daily NOEL: 1,000 mg/kg Method: OCED Guideline 408 Information given is based on data obtained from similar |

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substances.

Species: Rat, Male and female

Sex: Male and female

Application Route: Inhalation

Dose: 0, 300, 1000, 3000 ppm

Exposure time: 13 wk

Number of exposures: 6 hrs/d, 5 d/wk

NOEL: 3000 ppm

Method: OECD Guideline 413

Information given is based on data obtained from similar substances.

Genotoxicity in vitro

1-Dodecene

: Test Type: Ames test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro

Method: OECD Guideline 473

Result: negative

1-Tetradecene

Test Type: Ames test

Metabolic activation: with and without metabolic activation

Method: Mutagenicity (Escherichia coli - reverse mutation assay)

Result: negative

Test Type: Mammalian cell gene mutation assay

Metabolic activation: with and without metabolic activation

Method: OECD Guideline 476

Result: negative

Test Type: Chromosome aberration test in vitro

Method: OECD Guideline 473

Result: negative

Genotoxicity in vivo

1-Tetradecene

: Test Type: Micronucleus test

Species: Mouse

Method: Mutagenicity (micronucleus test)

Result: negative

Reproductive toxicity

1-Dodecene

: Species: Rat

Sex: male

Application Route: Oral diet

Dose: 0, 100, 500, or 1000 mg/kg

Exposure time: 44 D

Number of exposures: daily

Method: OECD Guideline 421

NOAEL Parent: 1,000 mg/kg

NOAEL F1: 1,000 mg/kg

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| | |
|--|--|
| | <p>Species: Rat Sex: female Application Route: Oral diet Dose: 0, 100, 500, or 1000 mg/kg Exposure time: 41-55 D Number of exposures: daily Method: OECD Guideline 421 NOAEL Parent: 1,000 mg/kg NOAEL F1: 1,000 mg/kg</p> |
| 1-Tetradecene | <p>Species: Rat Sex: male Application Route: Oral diet Dose: 0, 100, 500, 1000 mg/kg Exposure time: 43-47 days Method: OECD Guideline 422 NOAEL Parent: 1,000 mg/kg NOAEL F1: 1,000 mg/kg</p> |
| | <p>Species: Rat Sex: female Application Route: Oral diet Dose: 0, 100, 500, 1000 mg/kg Exposure time: 46-47 days Method: OECD Guideline 422 NOAEL Parent: 1,000 mg/kg NOAEL F1: 1,000 mg/kg</p> |
| AlphaPlus® C12-14 Blend Aspiration toxicity Toxicology Assessment | : May be fatal if swallowed and enters airways. |
| AlphaPlus® C12-14 Blend CMR effects | : Carcinogenicity: Contains no ingredient listed as a carcinogen Mutagenicity: Contains no ingredient listed as a mutagen Teratogenicity: Not available Reproductive toxicity: Contains no ingredient listed as toxic to reproduction |
| AlphaPlus® C12-14 Blend Further information | : Solvents may degrease the skin. |

SECTION 12: Ecological information**Ecotoxicity effects
Toxicity to fish**

| | |
|---------------|---|
| 1-Dodecene | : No toxicity at the limit of solubility. |
| 1-Tetradecene | LL50: > 1,000 mg/l Exposure time: 96 h |

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Species: *Oncorhynchus mykiss* (rainbow trout)
 semi-static test Test substance: yes
 Method: OECD Test Guideline 203
 The product has low solubility in the test medium. An aqueous dispersion was tested.

Toxicity to daphnia and other aquatic invertebrates

1-Dodecene : No toxicity at the limit of solubility.

1-Tetradecene EL50: > 1,000 mg/l
 Exposure time: 48 h
 Species: *Daphnia magna* (Water flea)
 Test substance: yes
 Method: OECD Test Guideline 202
 The product has low solubility in the test medium. An aqueous dispersion was tested.

Toxicity to algae

1-Dodecene : No toxicity at the limit of solubility.

1-Tetradecene EL50: > 1,000 mg/l
 Exposure time: 96 h
 Species: *Selenastrum capricornutum* (algae)
 static test Test substance: yes
 Method: OECD Test Guideline 201
 The product has low solubility in the test medium. An aqueous dispersion was tested.

Biodegradability : This material is expected to be readily biodegradable.

Elimination information (persistence and degradability)

Bioaccumulation : No data available

Mobility : No data available

Results of PBT assessment

1-Dodecene : Non-classified PBT substance, Non-classified vPvB substance

1-Tetradecene : Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information : No data available

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : This material is not expected to be harmful to aquatic organisms.

Long-term (chronic) aquatic hazard : This material is not expected to be harmful to aquatic organisms.

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SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

- Product : Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
- Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

UN3295, HYDROCARBONS, LIQUID, N.O.S., COMBUSTIBLE LIQUID, III

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR

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TRANSPORTATION BY THIS AGENCY.

| | |
|--------------------------|--|
| Other information | : ALPHA-OLEFIN (C-12+) MIXTURES, S.T. 2, Cat. Y |
|--------------------------|--|

Maritime transport in bulk according to IMO instruments**SECTION 15: Regulatory information****National legislation**

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Aspiration hazard

CERCLA Reportable Quantity : This material does not contain any components with a CERCLA RQ.

SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity : This material does not contain any components with a section 302 EHS TPQ.

SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA 313 Components : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

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This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

: 1-Dodecene - 112-41-4

US State Regulations

Pennsylvania Right To Know

: 1-Dodecene - 112-41-4
1-Tetradecene - 1120-36-1

California Prop. 65
Components

: This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

| | |
|-------------------------------------|--|
| Europe REACH | : This product is in full compliance according to REACH regulation 1907/2006/EC. |
| Switzerland CH INV | : On the inventory, or in compliance with the inventory |
| United States of America (USA) TSCA | : On or in compliance with the active portion of the TSCA inventory |
| Canada DSL | : All components of this product are on the Canadian DSL |
| Australia AIIC | : On the inventory, or in compliance with the inventory |
| Japan ENCS | : On the inventory, or in compliance with the inventory |
| New Zealand NZIoC | : On the inventory, or in compliance with the inventory |
| Korea KECI | : A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance or the exported amount does not exceed the minimum threshold quantity of the non-registered substance(s). |
| Philippines PICCS | : On the inventory, or in compliance with the inventory |
| Taiwan TCSI | : On the inventory, or in compliance with the inventory |
| China IECSC | : On the inventory, or in compliance with the inventory |

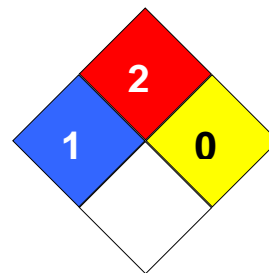
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SECTION 16: Other information

NFPA Classification : Health Hazard: 1
Fire Hazard: 2
Reactivity Hazard: 0

**Further information**

Legacy SDS Number : 6747

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

| Key or legend to abbreviations and acronyms used in the safety data sheet | | | |
|---|---|-------|---|
| ACGIH | American Conference of Government Industrial Hygienists | LD50 | Lethal Dose 50% |
| AIIC | Australian Inventory of Industrial Chemicals | LOAEL | Lowest Observed Adverse Effect Level |
| DSL | Canada, Domestic Substances List | NFPA | National Fire Protection Agency |
| NDSL | Canada, Non-Domestic Substances List | NIOSH | National Institute for Occupational Safety & Health |
| CNS | Central Nervous System | NTP | National Toxicology Program |
| CAS | Chemical Abstract Service | NZIoC | New Zealand Inventory of Chemicals |
| EC50 | Effective Concentration | NOAEL | No Observable Adverse Effect Level |
| EC50 | Effective Concentration 50% | NOEC | No Observed Effect Concentration |
| EGEST | EOSCA Generic Exposure Scenario Tool | OSHA | Occupational Safety & Health Administration |
| EOSCA | European Oilfield Specialty Chemicals Association | PEL | Permissible Exposure Limit |
| EINECS | European Inventory of Existing Chemical Substances | PICCS | Philippines Inventory of Commercial Chemical Substances |
| MAK | Germany Maximum Concentration Values | PRNT | Presumed Not Toxic |
| GHS | Globally Harmonized System | RCRA | Resource Conservation Recovery Act |
| >= | Greater Than or Equal To | STEL | Short-term Exposure Limit |
| IC50 | Inhibition Concentration 50% | SARA | Superfund Amendments and Reauthorization Act. |
| IARC | International Agency for Research on Cancer | TLV | Threshold Limit Value |
| IECSC | Inventory of Existing Chemical Substances in China | TWA | Time Weighted Average |
| ENCS | Japan, Inventory of Existing and | TSCA | Toxic Substance Control Act |

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| | | | |
|------|------------------------------------|-------|--|
| | New Chemical Substances | | |
| KECI | Korea, Existing Chemical Inventory | UVCB | Unknown or Variable Composition, Complex Reaction Products, and Biological Materials |
| <= | Less Than or Equal To | WHMIS | Workplace Hazardous Materials Information System |
| LC50 | Lethal Concentration 50% | ATE | Acute toxicity estimate |